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August 8, 1991

TO: Minerals File

FROM: Holland Shepherd, Senior Reclamation Specialist *HS*

RE: Site Inspection, Brush Wellman, Topaz Mine, M/023/003, Juab County, Utah

Date of Inspection: August 6, 1991

Time of Inspection: 10:00 a.m. - 2:00 p.m.

Conditions: Warm, sunny

Participants: Lee Davis, Greg Watkins, Brush Wellman; Rody Cox, Christina Reed, Michael Jackson, BLM; Holland Shepherd, DOGM

This inspection was performed to evaluate Brush Wellman's progress regarding their mining and reclamation plan (MRP). It was also performed to introduce two new BLM staff members to the mine site (Mr. Cox and Ms. Reed). Regarding the MRP, the operator has committed to mine in a fashion that will allow for both contemporaneous reclamation and development of the mine site each year and to keep the operator's surety at the approved amount of \$311,300 over a 15-year period.

Our last inspection of the site was performed in December, 1990. Much has been accomplished since that last inspection. The operator has performed a considerable amount of reclamation; several of the pits have been backfilled and seeding and mulching has been completed on several of the retired dumps and roads.

We started the inspection off with a summary presentation provided by Mr. Watkins, of work completed and proposed at the mine site. The summary covered everything that has transpired since our last inspection. We discussed the following: areas that have been reclaimed during the last year; areas that are now being developed; areas that are proposed for development; and areas which have been given variances. Some of the areas where variances were granted, have been improved voluntarily by Brush Wellman. These areas will be discussed in more detail later.

The first portion of the field inspection consisted of a look at the Sig Emma Pit and the Taurus Pit. These two pits have been completed by the operator; they are still open and will not be backfilled. The operator has constructed a 6 - 8 foot berm around these two pits and has revegetated the access roads around the perimeter of the pit. Much of the reclamation associated with these two pits, associated waste dumps and periphery of the pits, has been completed. The operator will now wait until revegetation success can be determined. These areas were reclaimed last spring, 1991.

Our next visit was made to the Roadside 2 and 3 pit area. These two pits, directly adjacent to one another, are now completely backfilled. The material that was backfilled into the pits has raised the ground surface level approximately 20 - 40 feet. The pits have been filled with material composed mostly of rhyolite. This material will eventually be reseeded. The operator has proposed to take some extra soil material and spread it over this area to a depth of 3 - 6 inches, in an attempt to gain better revegetation success. The area that the operator proposes to do this on encompasses about 73 acres of the site. This is something that was not originally committed to in the mining and reclamation plan. The operator has voluntarily offered to do this in an effort to achieve better reclamation success on the area described.

Also, associated with this portion of the mine is a large tuft dump that the operator has capped with rhyolite material to gain better reclamation success. The tuft does not support plant establishment. The operator has done this because of the visual exposure of this portion of the mine to an area within the Fish Springs Wilderness Study Area (WSA), about 10 miles to the west of the mine site. The operator hopes to provide a more aesthetic look to this portion of the mine site so that it will not detract from the wilderness experience of individuals enjoying the closely situated WSA.

The operator is concerned with the aesthetic appeal of other areas of the mine site as well as this one and is taking steps to enhance these areas. The mine site is situated on public lands, and a county road crosses immediately adjacent to the north end of the mine site.

Our next stop was to the area designated the Roadside Floral Pits 3 and 4. These pits have been partially backfilled. They are still, for the most part, open and will eventually be completely backfilled. The operator intends to extend these pits on further to the south as time goes on, into what is designated, in the permit, the Roadside 4 and Fluro 2 areas. The operator has established a substantial safety berm along the western edge of the pits, as it's western highwall is quite steep and deep.

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Some ponding is apparent at the bottom of the pit, ponding is also occurring at the bottom of other pits. According to the operator, the ponding occurs from the accumulation of rain water and is not an indication of encountering groundwater in the area.

Our next visit was made to the Blue Chalk pit area of the mine. The operator is currently actively mining this pit (Blue Chalk South 2 and 3) . The operator has encountered some problems with highwall stability of the steep northwestern side of the pit. Apparently, a fault was encountered and an extensive slick-slide developed, causing portions of the highwall to collapse into the pit.

We inspected the Blue Chalk rhyolite waste dump, that was reclaimed approximately two years ago by the operator. There has been no evident reclamation success on this area at this time. The operator may either dump more waste rock on this area, over the next five years, or may attempt another reseeding. We explained to the operator that the best way to revegetate, would be to rip the material again, broadcast seed and then scarify the seed into the rhyolite material. No mulching or fertilizing would be required. We explained to the operator that if this was done, the BLM and the Division would not ask that anything further be done on the area and would release the area from further reclamation responsibilities.

Also in this area, a large portion of the Blue Chalk South #1 has been backfilled (about 55 acres). The operator wants to reclaim this and has proposed spreading 3 - 4 inches of topsoil over the top of this area. Topsoil would be taken from that already proposed to be used in another area, so would reduce the depth of the topsoil that would have been used on another area of rhyolite dump. The operator hopes that by doing this, a larger area of the mine would be better reclaimed than if the topsoil were to be used in a small concentrated area. We agreed with the operator that before doing this to an extensive area, test plots would be established to evaluate plant success on depths of 3 inches, 6 inches, 1 foot and 0 inches. The operator proposed that the top of the Section 16 waste dump would be used to establish these plots; each one would be approximately football field size.

The operator is concerned that reclamation release be made formally with the Division and BLM. I asked Mr. Watkins to provide me with the numbers and description of areas that had been reclaimed, the acreage and a cost estimate of what it had cost the operator to do the reclamation. I indicated to him that release could be made on these areas for the dirt work that had already been performed but not for the

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revegetation, because it would take a minimum of three years to determine revegetation success.

I indicated to Mr. Watkins that I would send him a copy of the field inspection memo, and discuss in it the commitments and agreements that we had made during today's field inspection.

jb

cc: Greg Watkins, Brush Wellman  
Rody Cox, BLM, Warms Springs RA  
Wayne Hedberg, DOGM